

REMARKS

Applicants have amended their claims herein to better clarify the invention. Claims 1, 9, 14, and 19, are amended herein to recite, *inter alia*, a data storage and retrieval system comprising a host computer, a first virtual tape controller, a second virtual tape controller, a first virtual tape server comprising a first adjustable aggregate bandwidth. Support can be found in FIG. 1A which shows data storage and retrieval system 100 comprising host computer 110, first virtual tape controller 120, second virtual tape controller 125, first virtual tape server 130, and second virtual tape server 140, and in the Specification on Page 2 at Lines 19-20.

Claims 1, 9, 14, and 19, are further amended herein to recite that the first virtual tape controller comprises a first virtual host device and a first virtual copy device. Support can be found in the Specification on Page 5 at Lines 3-5. Claims 1, 9, 14, and 19, are further amended herein to recite that the second virtual tape controller comprises a second virtual host device and a second virtual copy device. Support can be found in the Specification on Page 5 at Lines 7-9. Claims 1, 9, 14, and 19, are further amended herein to recite that the first virtual tape server comprises a third virtual host device and a third virtual copy device. Support can be found in the Specification on Page 5 at Line 20 through Page 6 at Line 2. Claims 1, 9, 14, and 19, are further amended herein to recite that the second virtual tape server comprises a fourth virtual host device and a fourth virtual copy device. Support can be found in the Specification on Page 7 at Lines 16-19.

Claims 1, 9, 14, and 19, are further amended herein to recite that the host computer communicates with the first virtual tape server via the first virtual host device and the third virtual host device. Support can be found in the Specification on Page 5 at Lines 11-12, and in

FIG. 1A at host computer 110, virtual host device 121, and virtual host device 131. Claims 1, 9, 14, and 19, are further amended herein to recite that the host computer communicates with the second virtual tape server via the second virtual host device and the fourth virtual host device. Support can be found in the Specification on Page 7 at Lines 9-10, and in FIG. 1A at host computer 110, virtual host device 126, and virtual host device 144. Claims 1, 9, 14, and 19, are further amended herein to recite that the first virtual tape server communicates with the second virtual tape server via the first virtual copy device, the second virtual copy device, and the fourth virtual copy device. Support can be found in FIG. 1A at virtual copy device 136, virtual copy device 128, and virtual copy device 146.

No new matter has been entered. Reexamination and reconsideration of the application, as amended, is respectfully requested.

Claims 1-21 stand rejected under 35 USC 103(a) as being unpatentable over Liseicki et al. (U.S. Pub. No. 2002/0147774) in view of Ravi et al (U.S. Pat. No. 6,292,834).

Liseicki et al. teach a system and method to provide persistent, replicated, networked storage of Internet context, e.g., graphics, images, HTML, streaming media files, software, and other digital objects. Paragraph [0008]. Liseicki et al. nowhere teach use of a data storage and retrieval system comprising a host computer, a first virtual tape controller, a second virtual tape controller, a first virtual tape server comprising a first adjustable aggregate bandwidth, and a second virtual tape server, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. Moreover, Liseicki et al. nowhere teach use of a first virtual tape controller comprising a first virtual host device and a first virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. In addition, Liseicki et al. nowhere teach use of a second virtual tape

controller comprising a second virtual host device and a second virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. Furthermore, Liseicki et al. nowhere teach use of a first virtual tape server comprising a third virtual host device and a third virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. In addition, Liseicki et al. nowhere teach use of a second virtual tape server comprising a fourth virtual host device and a fourth virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein.

Liseicki et al. nowhere teach use of a data storage and retrieval system wherein the host computer communicates with the first virtual tape server via the first virtual host device and the third virtual host device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein.

Liseicki et al. nowhere teach use of a data storage and retrieval system wherein the host computer communicates with the second virtual tape server via the second virtual host device and the fourth virtual host device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. Liseicki et al. nowhere teach use of a data storage and retrieval system wherein the first virtual tape server communicates with the second virtual tape server via the first virtual copy device, the second virtual copy device, and the fourth virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein.

Ravi et al. teach an efficient transmission of multimedia streams from a server to a client computer over a diverse computer network including local area networks (LANs) and wide area networks (WANs) such as the internet. Col 3. at Lines 1-7. Ravi et al. nowhere teach use of a data storage and retrieval system comprising a host computer, a first virtual tape controller, a second virtual tape controller, a first virtual tape server comprising a first

adjustable aggregate bandwidth, and a second virtual tape server, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. Moreover, Ravi et al. nowhere teach use of a first virtual tape controller comprising a first virtual host device and a first virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. In addition, Ravi et al. nowhere teach use of a second virtual tape controller comprising a second virtual host device and a second virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. Furthermore, Ravi et al. nowhere teach use of a first virtual tape server comprising a third virtual host device and a third virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. In addition, Ravi et al. nowhere teach use of a second virtual tape server comprising a fourth virtual host device and a fourth virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein.

Ravi et al. nowhere teach use of a data storage and retrieval system wherein the host computer communicates with the first virtual tape server via the first virtual host device and the third virtual host device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. Ravi et al. nowhere teach use of a data storage and retrieval system wherein the host computer communicates with the second virtual tape server via the second virtual host device and the fourth virtual host device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. Ravi et al. nowhere teach use of a data storage and retrieval system wherein the first virtual tape server communicates with the second virtual tape server via the first virtual copy device, the second virtual copy device, and the fourth virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein.

In *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 167 L. Ed. 2d 705 (2007), the Supreme Court held that the obviousness analysis of *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 86 S. Ct. 684, 15 L. Ed. 2d 545 (1966), controls an obviousness inquiry. The *Graham* obviousness factors include “the scope and content of the prior art” and the “differences between the prior art and the claims”. *KSR*, 127 S. Ct. at 1734 (quoting *Graham*, 383 U.S. at 17-18). For the reasons set forth above, Applicants respectfully submit that the prior art of record fails to teach or suggest all the elements of Applicants’ claims.

The combined teachings of Liseicki et al. and Ravi et al. nowhere teach use of a data storage and retrieval system comprising a host computer, a first virtual tape controller, a second virtual tape controller, a first virtual tape server comprising a first adjustable aggregate bandwidth, and a second virtual tape server, as recited in Applicants’ claims 1, 9, 14, and 19, as amended herein. Moreover, the combined teachings of Liseicki et al. and Ravi et al. nowhere teach use of a first virtual tape controller comprising a first virtual host device and a first virtual copy device, as recited in Applicants’ claims 1, 9, 14, and 19, as amended herein. In addition, the combined teachings of Liseicki et al. and Ravi et al. nowhere teach use of a second virtual tape controller comprising a second virtual host device and a second virtual copy device, as recited in Applicants’ claims 1, 9, 14, and 19, as amended herein. Furthermore, the combined teachings of Liseicki et al. and Ravi et al. nowhere teach use of a first virtual tape server comprising a third virtual host device and a third virtual copy device, as recited in Applicants’ claims 1, 9, 14, and 19, as amended herein. In addition, the combined teachings of Liseicki et al. and Ravi et al. nowhere teach use of a second virtual tape server comprising a fourth virtual

host device and a fourth virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein.

The combined teachings of Liseicki et al. and Ravi et al. nowhere teach use of a data storage and retrieval system wherein the host computer communicates with the first virtual tape server via the first virtual host device and the third virtual host device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. The combined teachings of Liseicki et al. and Ravi et al. nowhere teach use of a data storage and retrieval system wherein the host computer communicates with the second virtual tape server via the second virtual host device and the fourth virtual host device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein. The combined teachings of Liseicki et al. and Ravi et al. nowhere teach use of a data storage and retrieval system wherein the first virtual tape server communicates with the second virtual tape server via the first virtual copy device, the second virtual copy device, and the fourth virtual copy device, as recited in Applicants' claims 1, 9, 14, and 19, as amended herein.

Claims 2-8, as amended herein, depend, directly or indirectly, from claim 1, as amended herein. Under 35 U.S.C. § 112, fourth paragraph, "a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." "If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious." MPEP 2143.03; *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.Cir. 1988). Applicants respectfully submit that claims 2-8, as amended herein, are patentable over the teachings of Liseicki et al. and Ravi et al.

Claims 10-13, as amended herein, depend, directly or indirectly, from claim 9, as amended herein. Under 35 U.S.C. § 112, fourth paragraph, "a claim in dependent form shall be

construed to incorporate by reference all the limitations of the claim to which it refers.” “If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.” MPEP 2143.03; *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.Cir. 1988). Applicants respectfully submit that claims 10-13, as amended herein, are patentable over the teachings of Liseicki et al. and Ravi et al.

Claims 15-18, as amended herein, depend, directly or indirectly, from claim 9, as amended herein. Under 35 U.S.C. § 112, fourth paragraph, “a claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.” “If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.” MPEP 2143.03; *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.Cir. 1988). Applicants respectfully submit that claims 15-18, as amended herein, are patentable over the teachings of Liseicki et al. and Ravi et al.

Having dealt with all of the outstanding objections and/or rejections of the claims, Applicants submit that the application as amended is in condition for allowance, and an allowance at an early date is respectfully solicited. In the event there are any fee deficiencies or additional fees are payable, please charge them, or credit an overpayment, to our Deposit Account No. 502262.

Respectfully submitted,

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